

REMARKS

I. Status of the Application

Claims 12-23 are all the claims currently pending in the application. Claims 12-23 have been rejected. The present Response addresses each point of rejection raised by the Examiner. Favorable reconsideration is respectfully requested.

II. Claim Rejections Under 35 U.S.C. § 103(a)

Claims 12-23 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Publication No. 2002/0153361 to Sakamoto et al. (hereinafter “Sakamoto”) in view of U.S. Publication No. 2003/0160034 to Filgas et al. (hereinafter “Filgas”). Applicants respectfully traverse this ground of rejection.

Preliminarily, Applicants note that the Examiner has failed to establish a *prima facie* case of obviousness for *at least* dependent claims 13-17 and 19-23. An applicant is entitled to a patent unless the Examiner provides a reasonable basis explaining why the claimed invention is not patentable. The initial burden is on the Examiner to present a *prima facie* case of obviousness, and the analysis supporting a rejection under 35 U.S.C. § 103 should be made explicit. MPEP § 2142. In rejecting the claims, the Examiner only addresses some of the elements recited in independent claims 12 and 18. The Examiner does not explain where any of the references teach or suggest the elements recited in claims 13-17 and 19-23, or why incorporating the recited elements would have been obvious to a person of ordinary skill in the art. Therefore, the Examiner has not established a *prima facie* case of unpatentability for these claims. Applicants respectfully request that the Examiner remedy these deficiencies in the next Office Action, and that the next Office Action be made non-final in order to give the Applicants the opportunity to respond fully to each ground of rejection.

In rejecting claims 12-23, the Examiner maintains that the abstract and paragraphs [0021]-[0034] of Sakamoto disclose all of the features recited in independent claims 12 and 18, except for “three polarizers or the use of a deformable mirror” (Office Action, pages 2-3). However, the Examiner maintains that Filgas discloses “multiple polarizers and a fold (deformable) mirror,” and that it would have been obvious to incorporate these features into the apparatus of Sakamoto, “because the a third polarizers is merely an addition of multiples and a form mirror allows for more maneuverability. Duplication of parts was held to be obvious. In re Harza 124 USPQ 378” (sic) (Office Action, page 4). Applicants respectfully disagree.

Independent claims 12 and 18 recite a laser machining apparatus comprising a first polarizing beam splitter that receives light from a laser oscillator, passes a first laser beam, and reflects a second laser beam. Although Fig. 4 of Sakamoto shows a splitting means 19 that receives a laser beam 18 from a laser oscillator (not shown), passes a laser beam 18a, and reflects a laser beam 18b, the splitting means 19 is not a polarizing beam splitter, as recited in claims 12 and 18. There is only one polarizing beam splitter in Fig. 4 of Sakamoto, namely the polarizing beam splitter 21 that reflects the laser beam 18a (after its polarization has been rotated 90° by the phase plate 20) and transmits the laser beam 18b (after it has been deflected by the galvanometer scanner 6) (§ [0084]). Similarly, Fig. 8 of Sakamoto shows a spectral deflecting beam splitter 28 that receives a laser beam 27 from a laser oscillator (not shown), passes a laser beam 27a, and reflects a laser beam 27b, not a polarizing beam splitter, as recited in claims 12 and 18.

Applicants submit that claims 12 and 18 are patentable over Sakamoto at least by virtue of the aforementioned differences, as well as their additionally recited features. Further, Filgas fails to remedy the deficient teachings of Sakamoto. Although Filgas discloses that a section of the pumped waveguide 203 may act as a polarizer (§ [0047]), Filgas does not disclose a

polarizing beam splitter. Therefore, claims 12 and 18 are patentable over Sakamoto and Filgas at least by virtue of the aforementioned differences, as well as their additionally recited features. Further, claims 13-17 and 19-23 are patentable over Sakamoto and Filgas at least by virtue of their respective dependencies on claims 12 and 18, as well as their additionally recited features.

With further regard to independent claim 12, as discussed above, each embodiment of Sakamoto discloses (at most) one polarizing beam splitter. The Examiner concedes that Sakamoto fails to disclose “a third polarizing beam splitter, capable of polarizing-angle adjustment, disposed in front of the first polarizing beam splitter,” as recited in claim 12. However, the Examiner cites paragraph [0047] of Filgas as allegedly disclosing multiple polarizers, and maintains that it would have been obvious to incorporate multiple polarizers into the apparatus of Sakamoto. As discussed above, the cited paragraph of Filgas does not disclose any polarizing beam splitters, and merely indicates that a section of the pumped waveguide 203 of Filgas may act as a polarizer. Also, the Examiner suggests that adding another polarizer to the apparatus of Sakamoto would merely be an addition of multiples, and that duplication of parts was held to be obvious. However, claim 12 recites that the third polarizing beam splitter is capable of polarizing-angle adjustment, and is disposed in front of the first polarizing beam splitter. Therefore, the claimed third polarizing beam splitter is not merely a duplication of another polarizing beam splitter in Sakamoto.

With further regard to independent claim 18, the Examiner fails to point out where either Sakamoto or Filgas discloses “a measuring means for measuring the focal positions of the laser beams.” Applicants submit that neither Sakamoto nor Filgas discloses such a measuring means. Further, although the Examiner concedes that Sakamoto fails to disclose a deformable mirror, the Examiner maintains that fold mirrors 416 of Filgas are deformable mirrors, as recited in claim


18. Applicants respectfully disagree. As a person of ordinary skill in the art understands, a deformable mirror is a mirror that can change its shape (see, e.g., page 21, third full paragraph of present specification). In contrast, the fold mirrors 416 of Filgas are merely planar mirrors that do not change their shape. Therefore, neither Sakamoto nor Filgas discloses a deformable mirror as recited in claim 18.

III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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